

Geography 203 – online

Introduction to Geographic Information Systems

Course Description

This online course offers an introduction to basic concepts and techniques of geographic information systems (GIS) used for descriptive geostatistical analysis and visualization of spatial data. Operational training in GIS is included; students should be very comfortable with Windows. Access to a computer capable of running ArcGIS software (provided) and selected software (such as MS Excel, not provided) is required. Students will apply their acquired skills in a final GIS project.

Instructor	Dr. Julia Siemer
Zoom Room	See URCourses (https://zoom.us/j/3154649513)
Zoom Room Hours	Tuesdays and Thursday, 1:30 pm – 2:30 pm
Office Hours	Mondays, Wednesdays, 11:00 am – 12:00 noon, or by appointment
Office/Contact	CL 329, Tel: 585.4405, e-mail: julia.siemer@uregina.ca

Textbook (required)	JENSEN, John R and JENSEN, Ryan R (2013): <i>Introductory Geographic Information Systems</i> . Pearson. Boston ISBN 978-0-614776-3 Available at the University Bookstore
URCourses	All distributions of materials and communication will take place in URCourses
Prerequisites	Any 100-level GEOG course or permission of department head
Computer Requirements	See URCourses for a detailed list of requirements of a computer for this course. If your computer does not meet the requirements and you are on campus you can also access ArcGIS in the public lab CL 109, and in the TERRA lab (CL 330.2) which requires a key card (can be obtained from the Department of Geography and Environmental Studies, CL 340).
Software Requirements	Access to a spreadsheet software (eg. MS Excel or similar) is required. ArcGIS is provided for this course. See URCourses for instructions to download and install the software. ArcGIS is also available on campus in the public lab CL 109, and in the TERRA lab (CL 330.2) which requires a key card (can be obtained from the Department of Geography and Environmental Studies, CL 340).

Evaluation	Participation in online class activities 5% ArcGIS-Exercises (6; each 5%; required) 30% Quiz (Sept 30, 2019; required) 5% Online Midterm Exam (Nov 04, 2019; required) 30% GIS project (Midway checks: Nov 15/29, 2019; required; Due date of complete Final Project: Dec 06, 2019; required) <u>30%</u> 100%
Participation	This part of your final grade is based on your participation in the 'Unit in Review Forum' (at the end of units 2 to 6) and posts to the 'ArcGIS Difficulties Forum' (in the Course Communication Area) helping other students. Marking will be based on effort and quality.
ArcGIS-Exercises	These exercises are found in units 2 to 6 on the course site. Each lab exercise is explained in a video and detailed instructions are available as PDF. Additional help and background information relating to the labs can also be found in the 'Lab Exercises & Help' section.
Quiz	There will be one quiz early in the semester. Students will be able to attempt the quiz over the course of 1 day, but will have a brief finite time to complete. Make sure you wait until you have at least one uninterrupted hour before starting. The quiz closes at 10:00 pm Regina time.
Online Midterm	There are two parts included in this online midterm. Students will be able to attempt the exam over the course of 1 day but have limited time to complete. <u>Note URCourses web activity of each student will be tracked within the course during this exam.</u> Content of the midterm will be based on lectures, required readings, and lab exercises.
GIS project	There will be two mandatory non-graded midway checks. If you require personal feedback, please contact your instructor. Due to the take-home nature of the final project there are no deadline extensions possible. It is highly recommended to attend Zoom Room hours (Tuesdays/Thursdays, 1:30 – 2:30 pm) for general issues and software questions.
Knowledge and Effort	This course requires <u>computer file management skills and the ability to work within a Windows computer environment without assistance.</u> Students are expected to spend considerable time developing thoughtful products, as well as conducting limited research to feed into their written assignments. Students must demonstrate a mature, professional, and conscientious effort toward class work and participation. In addition to lectures and software instructions, students should expect an average weekly work-load of 2 hours for assigned readings and up to 2.5 hours of individual (computer) work, depending on previous experience with ArcGIS or similar software.

Late Assignments and Missed Examinations

All assignments/labs, projects and exams are required. A missed or late assignment or exam results in a grade of NP for the course. Due dates for assignments/labs are specified in the schedule (page 4).

Assignments/labs or projects that are submitted late will be penalized 10% per day (including weekends, starting with the due day). Assignments/labs or project components submitted **more than 3 days late are not accepted** and result in a grade of NP for the course. A missed exam can normally not be written at a later time.

(See also section Accommodations)

Accommodations

Any student with a disability who may need accommodations should discuss these with the course instructor after contacting the Coordinator of the Disability Resource Office at 585-4631.

If you are **unable to complete an assignment, midterm examination or the final project** for compassionate or health reasons, contact the instructor **as soon as possible**. A medical certificate from an attending physician must accompany the request if the reason is medical. For other reasons, such evidence as is appropriate should be provided.

Tentative Schedule

<i>Dates</i>	<i>Unit</i>	<i>Lecture Topic</i>	<i>Required Readings Chapter (Pages)/ Due Dates</i>
Sept 4–6	1	Introduction to the course Accessing and installing ArcGIS	
Sept 9–20	2	What is GIS? History of GIS and misconceptions Types of geographic data/Models of geographic reality Lab 1: Importing data, creating data sets I	1 (1–20) 1 (4–8) Due date: Sept 20, 2019
Sept 23–27	3	Geographic data models and databases Data quality and metadata Lab 2: Importing data, creating data sets II	5 (125–146) (107–120) Due date: Sept 27, 2019
Sept 30–Oct 4	4	Quiz Data collection and acquisition Canadian census; Standard Geographic Classification Lab 3: Selecting features, getting information about features	Sept 30, 2019 3 (55–76) Additional readings Due date: Oct 04, 2019
Oct 7–25	5	Descriptive spatial statistics Locational quotient Lab 4: Analyzing feature relationships, buffering features Spatial analysis I – Vector data analysis Spatial analysis II – Advanced vector data analysis Lab 5: Advanced spatial analysis	8 (233–244) -- Due date: Oct 11, 2019 6 (149–165) 8 (244–252) Due date: Oct 25, 2019
Oct 28–Nov 1	6	Cartography and GIS Lab 6: Presenting your results, map layout	10 (279–296) Due date: Nov 01, 2018
Nov 4		Midterm Exam	Nov 04, 2019
Nov 5–Dec 6	7	Work on individual Final GIS Project	Midway check I: Nov 15, 2019 Midway check II: Nov 29, 2019 Due date: Dec 06, 2019